

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A conveying apparatus for conveying a work, comprising:
a three-phase synchronous motor which is electrically connected to a three-phase AC power supply and is driven to output power by a three-phase AC voltage output from said three-phase AC power supply; and
a conveyor body which is operationally coupled to said three-phase synchronous motor and operates to convey said work with said power output from said three-phase synchronous motor,
wherein said three-phase synchronous motor has a stator including a plurality of teeth laid at predetermined equiangular distances, a first excitation coil, a second excitation coil, and a third excitation coil; wherein each of said teeth has wound around it one of the first to third excitation coils; wherein each of a group of those teeth around which said first excitation coil is wound, each of a group of those teeth around which said second excitation coil is wound, and each of a group of those teeth around which said third excitation coil is wound are laid out with two of said teeth of other groups placed in between adjoining teeth of said each group; and wherein one of three single-phase AC voltages included in said three-phase AC voltage is supplied to each of said first to third excitation coils.
2. (canceled).
3. (currently amended) The conveying apparatus according to claim 2 1, wherein said first to third excitation coils are connected to one another by a delta connection.

4. (currently amended) The conveying apparatus according to claim 2 1, wherein a number of said teeth is a natural multiple of 3.

5. (original) The conveying apparatus according to claim 1, wherein said three-phase synchronous motor is one of a plurality of three-phase synchronous motors, and said conveyor body is one of a plurality of feed rollers to which said three-phase synchronous motors are respectively coupled operationally.

6. (original) The conveying apparatus according to claim 1, wherein said three-phase synchronous motor is one of a plurality of three-phase synchronous motors, and said conveyor body comprises a plurality of feed rollers, wherein some of the feed rollers are respectively coupled operationally to said three-phase synchronous motors, and wherein the rest of the feed rollers are not coupled to any three-phase synchronous motor.

7. (original) The conveying apparatus according to claim 1, wherein said conveyor body comprises a plurality of feed rollers and said power to be output from said three-phase synchronous motor is supplied to at least two of said feed rollers.

8. (previously presented) The conveying apparatus according to claim 1, wherein said conveyor body is directly coupled to said three-phase synchronous motor.

9. (previously presented) The conveying apparatus according to claim 1, wherein said conveyor body is coupled to said three-phase synchronous motor without a speed reducer.

10. (previously presented) The conveying apparatus according to claim 1, wherein said conveyor body is coupled to said three-phase synchronous motor such that torque output from the synchronous motor is transmitted to the conveyor body without loss of torque.

11. (new) A conveying apparatus for conveying a work, comprising:
 - a three-phase synchronous motor which is electrically connected to a three-phase AC power supply and is driven to output power by a three-phase AC voltage output from said three-phase AC power supply; and
 - a conveyor body which is operationally coupled to said three-phase synchronous motor and operates to convey said work with said power output from said three-phase synchronous motor,
 - wherein said conveyor body is coupled to said three-phase synchronous motor without a speed reducer.
12. (new) The conveying apparatus according to claim 11, wherein said first to third excitation coils are connected to one another by a delta connection.
13. (new) The conveying apparatus according to claim 11, wherein a number of said teeth is a natural multiple of 3.
14. (new) The conveying apparatus according to claim 11, wherein said three-phase synchronous motor is one of a plurality of three-phase synchronous motors, and said conveyor body is one of a plurality of feed rollers to which said three-phase synchronous motors are respectively coupled operationally.
15. (new) The conveying apparatus according to claim 11, wherein said three-phase synchronous motor is one of a plurality of three-phase synchronous motors, and said conveyor body comprises a plurality of feed rollers, wherein some of the feed rollers are respectively coupled operationally to said three-phase synchronous motors, and wherein the rest of the feed rollers are not coupled to any three-phase synchronous motor.

16. (new) The conveying apparatus according to claim 11, wherein said conveyor body comprises a plurality of feed rollers and said power to be output from said three-phase synchronous motor is supplied to at least two of said feed rollers.

17. (new) The conveying apparatus according to claim 11, wherein said conveyor body is directly coupled to said three-phase synchronous motor.

18. (new) The conveying apparatus according to claim 11, wherein said conveyor body is coupled to said three-phase synchronous motor such that torque output from the synchronous motor is transmitted to the conveyor body without loss of torque.